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J.B. HOYT  
DIRECTOR, GOVERNMENT RELATIONS

August 10, 2004

Ms. Dorothy Shimer  
Research Division, 5<sup>th</sup> Floor  
Air Resources Board  
P.O. Box 2815  
Sacramento, CA 95812

Re: AB 1173

Dear Ms. Shimer:

Whirlpool Corporation welcomes the opportunity to provide comments (below) in response to the Draft Report on Indoor Air Pollution Mandated by AB 1173 (Keeley, 2002). As the world's largest manufacturer and marketer of major home appliances, we feel that we are well qualified to provide these observations and suggestions.

We would be pleased to respond to any questions or clarifications that your office may have.

Sincerely,

A handwritten signature in dark ink, appearing to read "J.B. Hoyt", is written over a light gray circular stamp.

[j\\_b\\_hoyt@whirlpool.com](mailto:j_b_hoyt@whirlpool.com)

**Comments of Whirlpool Corporation  
Regarding Indoor Air Quality  
Made to California Air Resources Board  
In Response to AB 1173  
August 10, 2004**

**Overall**

- Figure ES-1 indicates that Californians spend 14.9 hours per day (62% of their time) in their home. Given that 62.3% of Californians are employed (per Statistical Abstract of the United States), this data seems questionable:
  - If the 62.3% of the population who are employed spend 10 hours out of the home (e.g. 8 hours on the job plus a one hour commute each way), the remaining 37.8% of the population would have to spend 22.9 hours per day in their homes for the average of 14.9 hours to be accurate.
  - If the 62.3% spend 12 hours away from home engaged in employment, the non-working remainder of the population must spend 19.6 hours per day cloistered in their homes in order to achieve the 14.9 hour average.
- The report frequently takes various positions without presenting facts or any other basis for that conclusion. All positions should be based on facts, not supposition. Examples include:
  - Suggesting that Biological Agents are a result of poorly maintained air conditioners and dehumidifiers (page 3, ES)
  - Stating that exhaust hoods often are not used above gas stoves (page 7, ES)
- Table ES-2 indicates that the "Health End Point" costs of CO Poisoning are \$0.15 billion, the second smallest amount of the eight factors cited in the table and less than ½ of 1% of all costs shown in the Table. Efforts to improve IAQ should be prioritized to reflect the benefits. On that basis, CO poisoning should be a very low priority.
- The report indicates (page 14, ES) that "Ventilation not only removes and dilutes indoor air contaminants, it also removes moisture from the air which helps prevent mold growth, and removes body effluents such as carbon dioxide that lead to a stuffy environment." This is not the case. Ventilation simply moves air which is inside of the home to the outside of the home. That air is replaced with air which was previously outside of the home. The former outside air contains a mix of contaminants and moisture which may or may not be more desirable than that which was exhausted from the home. There is no basis whatsoever to determine in advance whether the level of moisture, carbon dioxide or any other contaminant inside the home will be greater or lesser as a result of ventilation. Further, to imply that CO producing appliances, such as gas ranges, should provide ventilation capability in order to impact moisture and/or body effluents is irrelevant to the reasons why consumers purchase such products. Air cleaning is a means of improving the air contaminant level in the home while dehumidification will reduce moisture levels. Should California consumers desire such improvements in indoor air, Whirlpool and many other firms manufacture and market products designed for these purposes.

### **Product Maintenance**

- Table ES-1 cites malfunctioning of poorly maintained products as major sources of CO, NO<sub>2</sub> and Biological Agents. While this may or may not be the case, to the extent this situation may exist, these factors do not reflect appliance design; rather they reflect consumer usage habits. Consumer education regarding the benefits of proper appliance maintenance would be more effective than added regulation. The report seems to concur with this when it indicates (Table ES-3, footnote 3), "Public education...should also be used where appropriate." However, the CARB is strongly encouraged to place Public Education at the top of the list of improvements, based on the opportunity for low cost, high affectivity in improving IAQ.

### **Air Cleaners**

- The report (page 16, ES) suggests that "...requirements for a pollutant removal efficiency rating would assist the consumer in making decisions when purchasing an air cleaner." We are pleased to inform you that such a rating exists. The Board is invited to [www.cadr.org](http://www.cadr.org) where the Clean Air Delivery Rate (CADR) for all AHAM certified air cleaners is available. The CADR indicates the volume of filtered air delivered by an air cleaner. Ratings are available for tobacco smoke, pollen and dust; the higher the number, the faster the unit filters the air.

### **Room Air Conditioners & Dehumidifiers**

- The report (page 3, ES) suggests that poorly maintained products are a source of Biological Agents. These reflect consumer usage habits and cannot be rectified through different design or external venting. Whirlpool is not aware of such concerns surfacing among the many purchasers of our products. It is recommended that this concern (if significant) be addressed solely through consumer education.

### **Gas Clothes Dryers**

- These products are already vented externally. Therefore, properly functioning units will not adversely impact IAQ. Regulation would add no value, only increasing the administrative burden.

### **Gas Ranges/Stoves/Ovens**

- The magnitude of any perceived issue with gas ranges/ovens must be kept in perspective; any remedy must reflect the nature of the perceived issue. Consumer Product Safety Commission (CPSC) data indicates that nationally over the period 1999 – 2001 there were 126 average annual non-fire carbon monoxide poisoning deaths. Of these 9 (annually) were attributed to gas ranges/ovens. California has 11.9% of the U.S. population and 10.5% of the U.S. households. This implies that less than one death per year in California is attributable to gas range/oven poisonings. No deaths were attributed to the use of gas dryers, room air conditioners, dehumidifiers or room air cleaners...the other household appliances mentioned in the CARB report. Public education regarding proper use and maintenance of appliances provides the lowest cost, highest affectivity approach to dealing with problems of such modest magnitude.

- The CPSC data referenced above does not distinguish between deaths as a result of normal usage of ranges/ovens and that caused during abusive uses such as utilization of a range/oven for home heating. While we are not aware of hard data on this subject, use of a range or oven for home heating will result in increased combustion, both in terms of time and burner heat, thereby generating greater amounts of CO than that generated under normal cooking conditions. Consequently, this type of abusive product use is far more likely lead to CO poisoning than under normal cooking conditions. The CPSC, after study of abusive use, determined that product changes were not required and only requested stronger warnings against such use in product instructions. Whirlpool Corporation has complied with this request.
- No effort is made to separate those IAQ claims regarding indoor cooking which utilize true indoor cooking appliances from claims regarding cooking done on charcoal grills, hibachis, etc inappropriately used indoors. That would reduce the already minor incidence of reported non-fire cooking CO poisonings to a level much lower than that otherwise presented
- By definition, combustion of natural gas creates by-products, so zero-emitting appliances cannot be developed. However, all Whirlpool-built products are designed and built to conform to the exacting standards set by the American National Standards Institute (ANSI).

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